©Copyright 2010 BROTHER INDUSTRIES, LTD.

P-touch Template Manual

Version 1.01

Model Name: PT-9800PCN/PT-9700PC

Created by: Brother Industries, Ltd.

Machine Model: PT-9800PCN/PT-9700PC

IMPORTANT - PLEASE READ CAREFULLY

This documentation (“Documentation”) gives you information that will assist you in controlling your Machine Model.

You may use the Documentation only if you first agree to the following conditions.

If you do not agree to the following conditions, you may not use the Documentation.

Condition of Use

You may use and reproduce the Documentation to the extent necessary for your own use of your Machine Model (“Purpose”). Unless expressly permitted in the Documentation, you may not;

(i) copy or reproduce the Documentation for any purpose other than the Purpose,

(ii) modify, translate or adapt the Documentation, and/or redistribution to any third party,

(iii) rent or lease the Documentation to any third party, or,

(iv) remove or alter any copyright notices or proprietary rights legends included within the Documentation.

No Warranty

a. Any updates, upgrades or alteration of the Documentation or Machine Model will be performed at the sole discretion of Brother. Brother may not respond to any request or inquiry about the Documentation.

b. THIS DOCUMENTATION IS PROVIDED TO YOU "AS IS" WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. BROTHER DOES NOT REPRESENT OR WARRANT THAT THIS DOCUMENTATION IS FREE FROM ERRORS OR DEFECTS.

c. IN NO EVENT SHALL BROTHER BE LIABLE FOR ANY DIRECT, INDIRECT, PUNITIVE, INCIDENTAL, SPECIAL, CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER, ARISING OUT OF THE USE, INABILITY TO USE, OR THE RESULTS OF USE OF THE DOCUMENTATION OR ANY SOFTWARE PROGRAM OR APPLICATION YOU DEVELOPED IN ACCORDANCE WITH THE DOCUMENTATION.

Contents

Introduction 4

What is P-touch Template? 4

Using P-touch Template 5

P-touch Template limitations 14

Precautions 24

Introduction

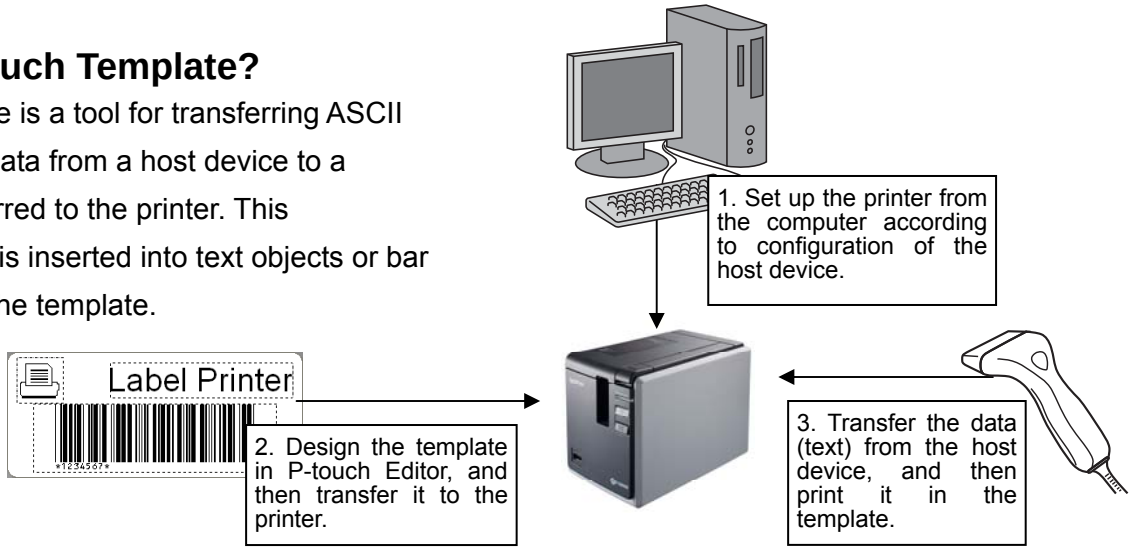
This material provides the necessary information for directly controlling the templates transferred to PT-9800PCN/PT-9700PC.

We accept no responsibility for any problems caused by programs that you develop using the information provided in this material, affecting software, data or hardware, including the PT-9800PCN/PT-9700PC, and any problems resulting directly or indirectly from them. Use this material only if you accept these terms.

This material shall not be reproduced, in part or in full, without prior approval. In addition, this material shall not be used as evidence in a lawsuit or dispute in a way that is unfavorable towards our company.

What is P-touch Template?

P-touch Template is a tool for transferring ASCII text and binary data from a host device to a template transferred to the printer. This transferred data is inserted into text objects or bar code objects in the template.



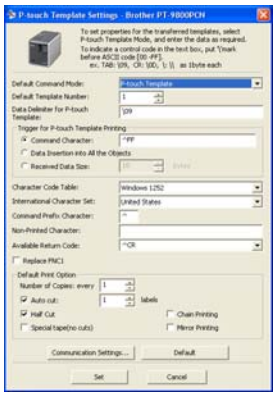
This allows the user to develop a printing system that connects directly from the host device. Compatible host devices are listed below.

- Scale/measurement devices
- Medical devices
- Bar code readers
- Control devices in any system environment

Note:

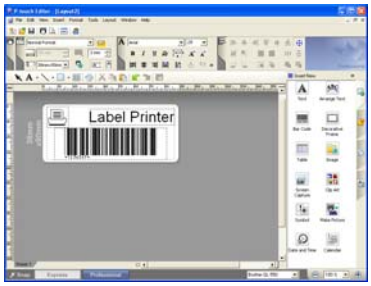
*The host device should be equipped with a connector for a serial cable (RS-232C) or USB-A cable in order to transfer the data.

Using P-touch Template

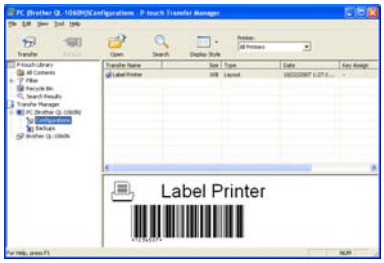


1. Set up the printer.
   With the P-touch Template Settings tool, specify the initial printer settings according to the host system environment or the host device that PT-9800PCN/PT-9700PC is connected to.
   (Refer to “P-touch Template Settings tool” on page 7.)

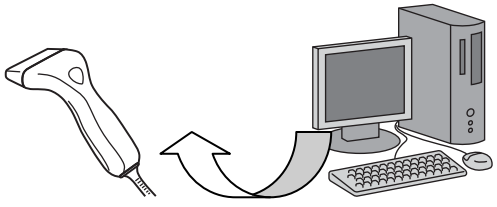
   The printer driver must first be installed via a USB connection.



2. Design the template.
   With P-touch Editor, design the template to be transferred.
   (Refer to “P-touch Template limitations” on page 14.)

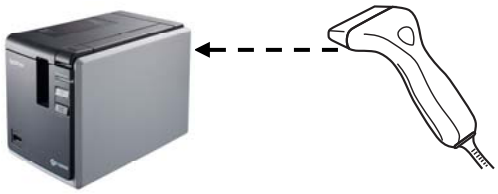


3. Transfer the template.
   With P-touch Transfer Manager, transfer the templates to the printer.
   (Refer to the PT-9800PCN/PT-9700PC User’s Guide.)



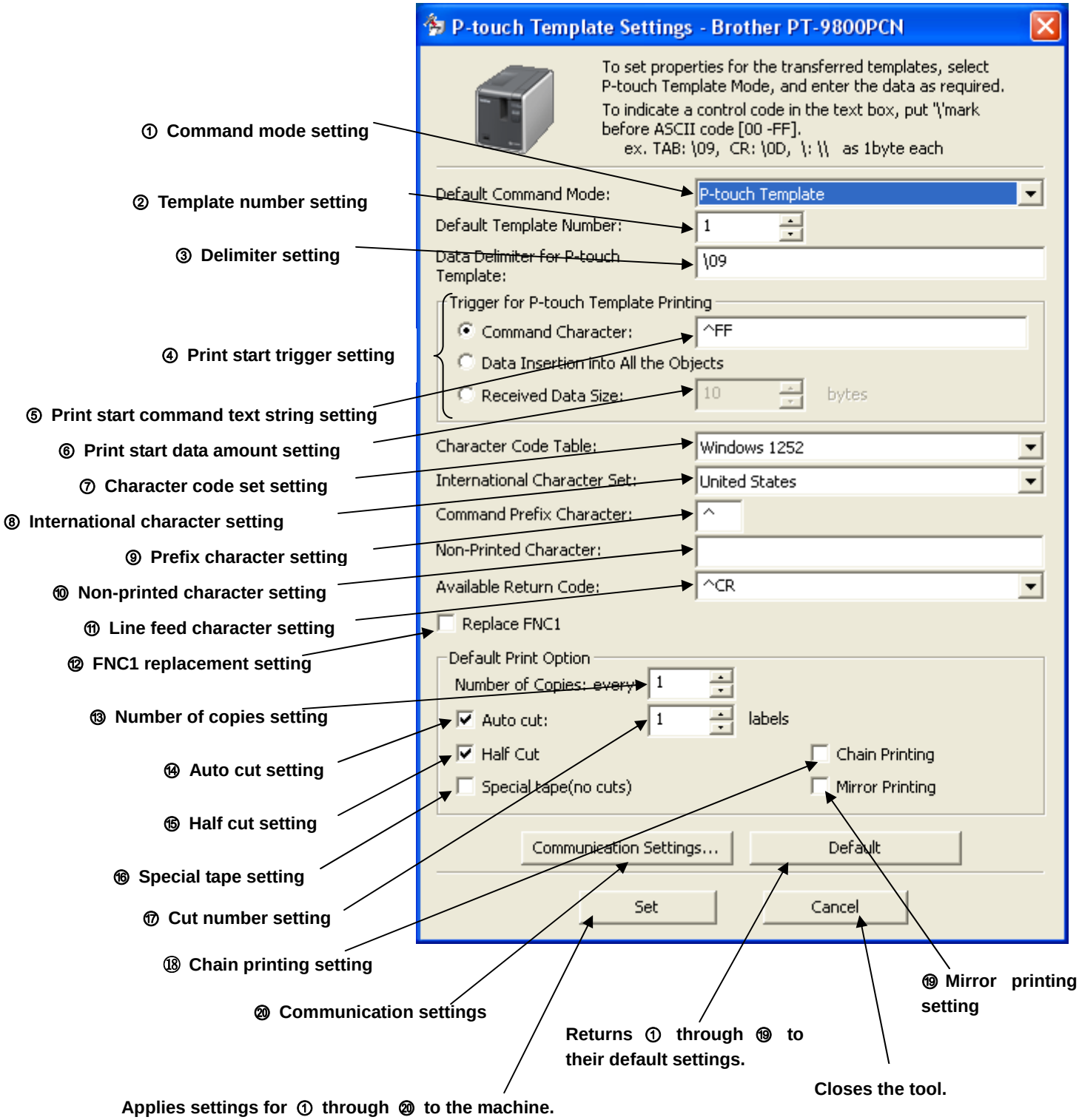
4. Program using P-touch Template commands.
   If any special commands are required to control the printer, change the host program as described in the P-touch Template Command Reference.
   (Refer to the P-touch Template Command Reference.)

5. Connect the printer to the host device, and print labels.
   Connect the printer to the host device by using a serial cable (RS-232C) or USB-A cable.
   Transfer the data, such as ASCII text, from the host device to templates on the machine, and print the labels.



*Refer to the sample code for details on using P-touch Template.

P-touch Template Settings tool



① Command mode setting

- P-touch Template mode
  To use P-touch Template, select the P-touch Template mode.
- ESC/P mode
- Raster mode

② Template number setting

Specify the template number selected as the default when the machine is turned on. However, if any template has been set to not be transferred to the machine, the number of that template cannot be specified.

③ Delimiter setting

A delimiter is the symbol used to indicate when to move to the next object in data that is being sent. Between 1 and 20 characters can be specified.

④ Print start trigger setting

Select one of the following three options for the print start trigger.

- Command Character

  (Printing starts when the command character specified in ⑤ is received.)

- Data Insertion into All the Objects
  (Printing starts when the delimiter for the last object is received.)
- Received Data Size

  (Printing starts when the number of characters specified in ⑥ is received. However, delimiters are not counted in the number of characters.)

⑤ Print start command text string setting

Specify 1 to 20 characters.

⑥ Print start data amount setting

The amount of data that must be received before printing can begin can be set between 1 and 999.

⑦ Character code set setting

Select one of the following three character codes. For details on the character code tables, refer to the character code tables in the P-touch Template Command Reference.

- Windows 1252
- Windows 1250
- Brother standard

⑧ International character setting

Select one of the following as the character set of the country.

- USA
- France
- Germany
- UK
- Denmark
- Sweden
- Italy
- Spain
- Japan
- Norway
- Denmark II
- Spain II
- Latin America
- Korea
- Legal

The following 12 codes are changed depending on the country selected from those mentioned above.

23h 24h 40h 5Bh 5Ch 5Dh 5Eh 60h 7Bh 7Ch 7Dh 7Eh

For the characters that are switched, refer to the international character set table in the

⑨ Prefix character setting

Change the prefix character code. Specify as a one-character character code.
The prefix character is the code for the first character that identifies commands that can be used in P-touch Template mode.

⑩ Non-printed character setting

The characters specified here are not printed when data is received. Specify 1 to 20 characters.

⑪ Line feed character setting

The line feed code is used when feeding data to indicate that the following data should be moved to the next line in a text object. One of the following four line feed codes can be selected, or 1 to 20 characters can be specified as the line feed code.

1. ^CR
2. \0D\0A
3. \0A
4. \0D

⑫ FNC1 replacement setting

This setting selects whether or not GS codes, which are included in bar code protocols such as GS1-128 (UCC/EAN-128), are replaced with FNC1 codes.
If the check box is selected, a received GS code is replaced with the FNC1 code. If the check box is cleared, a received GS code is outputted as is.

⑬ Number of copies setting

Specify the number of copies. A number between 1 and 99 can be specified.

⑭ Auto cut setting

If auto cutting is selected, the cut operation will be performed after the number of labels specified in ⑰.

⑮ Half cut setting

Specifies half cutting. If the check box is selected, half cuts are made. If the check box is cleared, half cuts are not made.

⑯ Special tape setting

Specifies the special tape (no cut) setting. If the check box is selected, the special tape setting is enabled, and the auto cut and chain printing settings are disabled (same as being turned off). If the check box is cleared, the special tape setting is disabled, and the operations for the auto cut and chain printing settings are performed as specified.

⑰ Cut number setting

A number between 1 and 99 can be specified.

⑱ Chain printing setting

Specifies chain printing. If the check box is selected, chain printing is enabled, and the tape is not fed or automatically cut after the last label is printed. If the check box is cleared, chain printing is disabled, and the tape is fed and automatically cut after the last label is printed.

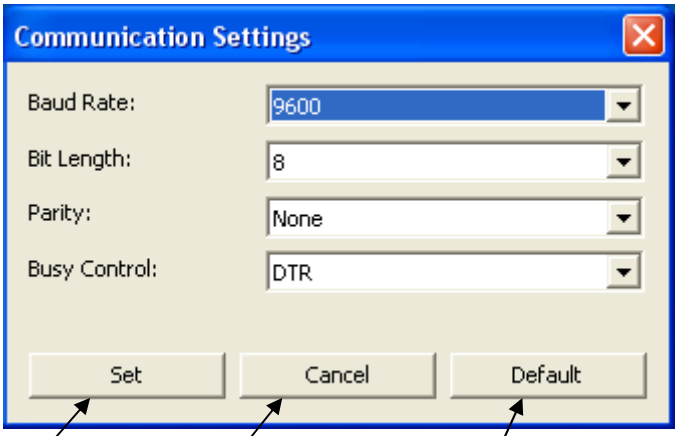
⑲ Mirror printing setting

Specifies mirror printing. If the check box is selected, mirror printing is enabled. If the check box is cleared, mirror printing is disabled.

⑳ Communication settings

Settings can be specified for the following parameters for serial communication.

- Baud Rate
  115200bps, 57600bps, 38400bps, 31250bps, 28800bps, 19200bps, 14400bps, 9600bps, 4800bps, 2400bps, 1200bps, 600bps
- Bit Length (bits)
  8 bits, 7 bits
- Parity
  None, Odd, Even
- Busy Control
  DTR, XON/XOFF



Applies the four settings to the machine.

Closes the Communication Settings dialog box.

Returns the four parameters to their default settings.

Others

・ ini file

After the [Set] button (in the main dialog box or the Communications Settings dialog box) is clicked, the settings are saved and the dialog box is closed.

(With PT-9800PCN)

C:\Documents and Settings\<*user_account_name*>\Application Data\Brother\Printer Settings\Pts202E.ini

(With PT-9700PC)

C:\Documents and Settings\<*user_account_name*>\Application Data\Brother\Printer Settings\Pts203C.ini

・ Entering text in text boxes ③, ⑤, ⑨ and ⑩

Characters that can be entered as text can be typed in, and control codes can be entered as ASCII codes (00 to FF) with \ in front of them.

Example: PRINT: [PRINT]
TAB control code: [\09]
Return control code: [\0D]
\: [\\]

P-touch Template limitations

■ Relating to text objects

・Fonts specified in P-touch Editor are converted to Helsinki, Letter Gothic or Brussels, depending on the font shape, when the data is sent to the machine.
(The font is converted according to the following rules: fixed pitch: Letter Gothic; serif: Brussels; san serif: Helsinki. Symbol fonts are converted to text objects if text input mode has been entered, and fonts are divided into three categories, as described above. If the text input mode has been exited, they are converted to image objects and the selected font is not converted.)

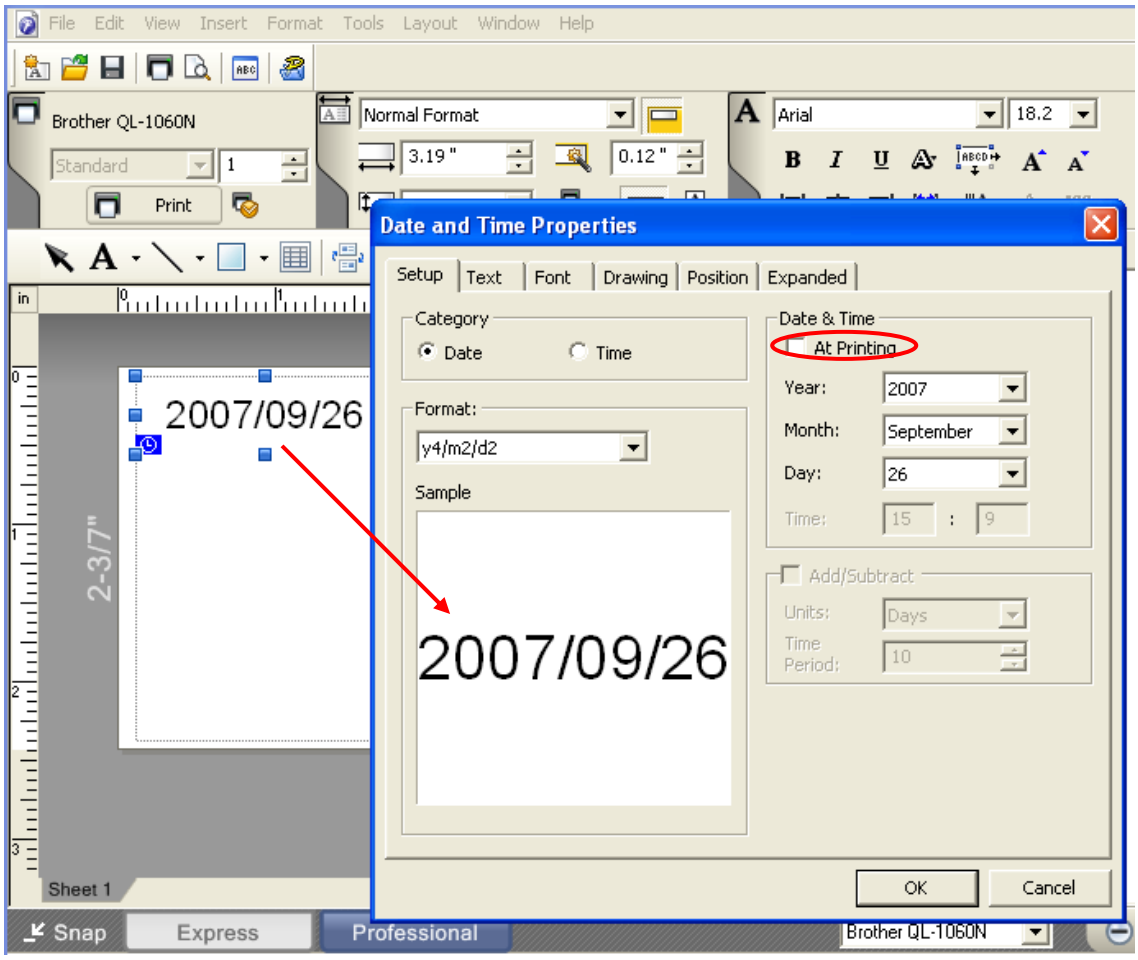
・Character sizes specified in P-touch Editor are converted to the closest built-in character size when the data is sent to the machine.

・Character sizes specified in P-touch Editor are all made the same size within an object.

・If “At Printing” is selected, a time stamp specified in P-touch Editor is not printed. If “At Printing” is not selected, the time stamp is printed with the date and time that the data was created in P-touch Editor.

・Depending on the language of the computer used for transferring, either the Western European or the Eastern European character set is used for characters within text objects.

“At Printing” setting

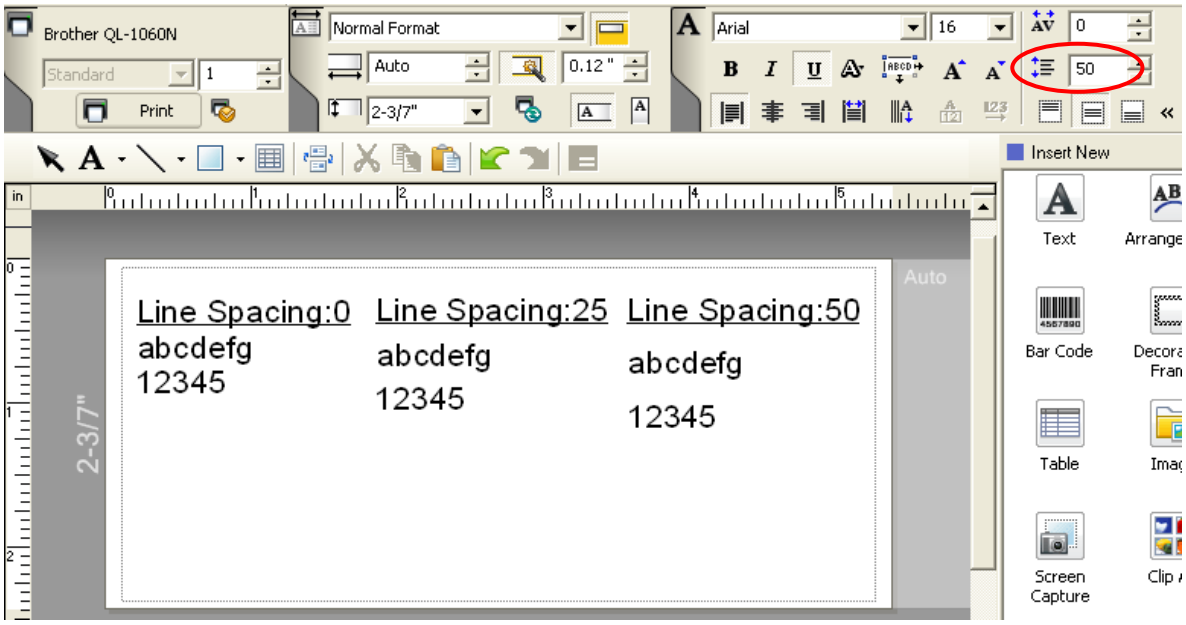


(To cancel the “At Printing” setting for a date/time in P-touch Editor, display the Date and Time Properties dialog box for the Date and Time object, and then clear the “At Printing” check box.)

- Horizontal alignment settings (“Justify” or “Equal Length”) specified in P-touch Editor are changed to the left alignment setting.
- The setting for line spacing with a line feed specified with the P-touch can be set between 0 and 255 dots.

  (A negative line spacing setting cannot be used in P-touch Editor. In addition, since there is an upper limit (about 21 mm) for the line width with the machine, a line spacing setting larger than this limit specified in P-touch Editor will not be applied on the machine.)

Specifying the line spacing setting in P-touch Editor



・Character styles specified in P-touch Editor are all made the same style within an object.

・If the “Long Text” setting is selected under “Text Layout” in P-touch Editor, the vertical alignment setting is normally set for top alignment.

・If "Long Text” is selected under “Text Layout” in P-touch Editor and continuous length tape is used, the print length is increased to fit the text.

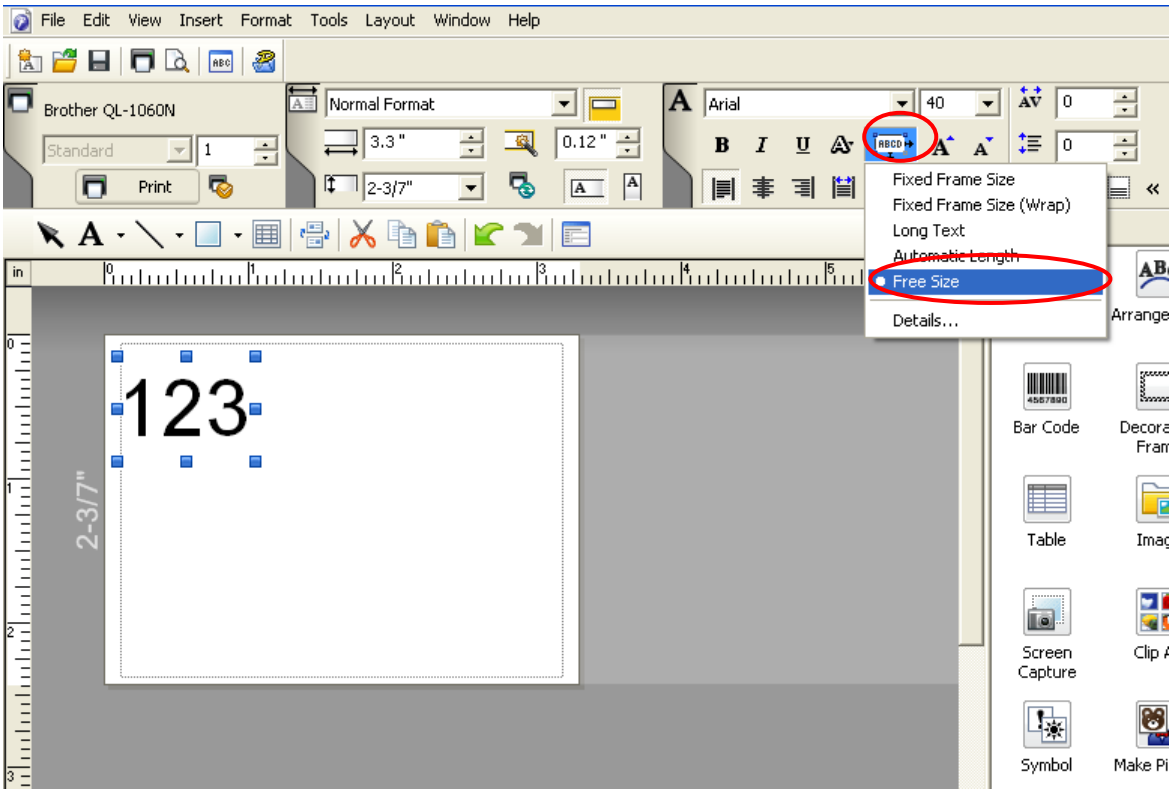
・If the “Fixed Frame Size (Wrap)” setting is selected under “Text Layout” in P-touch Editor, the object size does not change, and the text size is reduced.
(“Fixed Frame Size (Wrap)” is a setting that was added for inserting long text. Since it is possible that the text size may become extremely small if the wrapping feature is no longer applied, we recommend that “Fixed Frame Size” be selected when die-cut labels are specified in P-touch Editor or a fixed length is specified, or that “Automatic Length” be selected when an automatic media length is specified.)

1. Shrink to Fit: The size of the text object is fixed, and the text size is changed depending on the text length.
2. Clip Text: The size of the text object and the text size are fixed. If the text is too long, it is not printed.
3. Long Text: The width of the text object and the text size are fixed. If the text is too long, a line feed is automatically added, and the height of the text object is increased.
4. Automatic Length: The height of the text object and the text size are fixed. If the text is too

long, the width of the text object is increased.

5. Free Size: The text size is fixed. If the text is too long, the width of the text object is increased. If a line feed is added, the height of the text object is increased.

Specifying a Text Layout setting



Click the button circled in red to display a drop-down list, and then select the desired option.

■ Relating to bar codes

• Bar codes

・When trying to transfer a template containing a bar code that is not compatible with the machine, an error will occur while transferring and the template cannot be transferred to the machine.
The following bar codes are compatible with the machine.
1D bar codes
CODE39, ITF (I-2/5), UPC-A, UPC-E, EAN-13, EAN-8, CODE128, GS1-128 (UCC/EAN-128), RSS
2D bar codes
PDF417, QR Code, Micro QR Code, DataMatrix, MaxiCode, Micro PDF417

・If data containing characters incompatible with the protocol are fed into a bar code object, that bar code object is not printed.

・The bar code size may differ from that in the print result with P-touch Editor.
Since CODE128 and GS1-128 (UCC/EAN128) can easily be printed slightly larger, we recommend leaving larger margins when creating templates in P-touch Editor.

・If data fed into a bar code in a template created with P-touch Editor causes an extremely long bar code, the bar code may not be fully printed.

・Do not insert line feeds immediately before or immediately after the bar code data. Otherwise, it will be considered as part of the bar code data. In that case, the bar code will be created containing the line feed code, or the bar code will not be printed since data incompatible with the bar code protocol is entered.

・A delimiter or print start text string should be entered immediately after the bar code data.

• 1D bar codes

・A bar code wider than 22.5 cm will not be printed.

・A one-dimensional bar code taller than 27 mm is converted to 27 mm.

・The number of characters that can be entered for each bar code protocol is listed below.
CODE39: 2 to 50 characters (not including “*” on both sides)
ITF (I-2/5): 3 to 64 characters
EAN-8: 7 characters
EAN-13: 12 characters
UPC-A: 11 characters

UPC-E: 6 characters

CODABAR: 4 to 64 characters (with “A”, “B”, “C” or “D” at the beginning and end)

CODE128: 1 to 64 characters

GS1-128 (UCC/EAN-128): 1 to 64 characters

RSS-14: 3 to 15 characters (begins with “01”)

RSS Limited: 3 to 15 characters (begins with “01”; third digit is “0” or “1”)

RSS Expanded: 1 to 64 numbers or 1 to 40 letters*

* ISO646 characters can be printed.

<<numbers, letters, spaces, !, ”, %, &, ’, (,), *, +, ,, -, ., /, :, ;, <, =, >, ? and _>>

When trying to transfer data exceeding the ranges described above, an error will occur while transferring. If the data that is fed does not meet the minimum limit, the bar code is not printed. If the data exceeds the maximum limit, only the data to the maximum limit is applied. However, if the data exceeds 64 characters, the bar code is not printed.

・If a template is created in P-touch Editor with an extremely low bar code bar height, the bars may not be printed.

- CODE39

・When feeding data, the asterisks (*) at the beginning and end of the data are skipped.

- ITF (I-2/5)

・The bearer bar setting specified in P-touch Editor is invalid.

- QR Code

・The version setting for a QR Code specified in P-touch Editor is invalid. The version setting must be turned off.

・The linkage setting specified in P-touch Editor is invalid.

・If the value specified with the QR Code version command is outside of the allowable range, it is changed to AUTO. (MODEL1: 0 to 14, MODEL2: 0 to 40, Micro QR: 0 to 4)

- PDF417

・Since the error correction levels for PDF417 specified in P-touch Editor are inconsistent with those on the machine, the size of the bar code may change when it is printed with P-touch Template.

・The width for PDF417 specified in P-touch Editor may change from “Minimum” to “Small”.

・The linkage setting specified in P-touch Editor is invalid.

- DataMatrix

・The linkage setting specified in P-touch Editor is invalid.

・Macro settings specified in P-touch Editor are invalid.

- MaxiCode

・The linkage setting specified in P-touch Editor is invalid. It is linked when too much data is entered.

・When specifying the country code and service class with P-touch Editor, the number is entered at the beginning if the maximum number of characters is not reached. However, with the main unit, the number is entered at the end.

Example: “2” is specified. → P-touch Editor: “200”; Main unit: “002”

■ Relating to images

・If a template containing overlapping images is transferred with P-touch Editor, all image data will be overlapping. (P-touch Editor displays the image created last on top.)

■ Relating to databases

・When a database is transferred, it is named using the file name + sheet name (when created in Excel).
The file name can contain up to 15 bytes of characters (15 one-byte characters or 7 two-byte characters).
・A maximum of 99 databases can be transferred. However, the transfer cannot be completed if the amount of data being transferred exceeds 7,168 KB (for PT-9800PCN) or 2,048 KB (for PT-9700PC).
・If there is a line feed in a cell containing text to be replaced, only the string of characters before the line feed will be replaced.
・The text to be replaced can contain up to 256 characters.
・A database can contain a maximum of 65,000 rows.
If a database containing more than 65,000 rows is transferred, all data after the 65,000th row will be deleted.
・A database can contain a maximum of 100 columns.
If a database containing more than 100 columns is transferred, all data after the 100th column will be deleted.
・If there is no database linked to the template being printed, or if the corresponding string of characters to be replaced cannot be found, an error occurs.
・If columns linked to the template being printed are not in the database, the objects related to those columns remain as they were when the template was transferred.
・Depending on the language of the computer used for transferring, either the Western European or the Eastern European character set is used for characters within databases.

■ Relating to Numbering

・A single template can contain a maximum of 9 valid Numbering objects. Numbering will not be performed for Numbering objects that exceed the maximum of 9.
・A single object contains a single Numbering field.

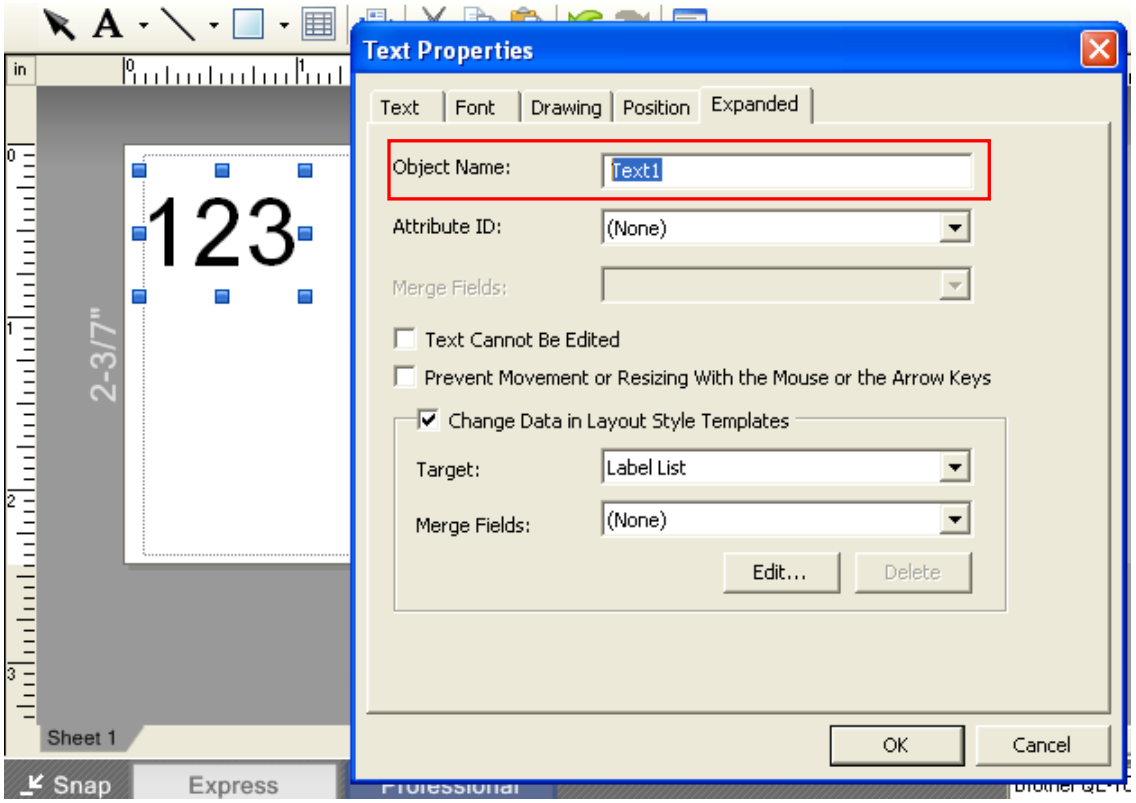
・A Numbering field can contain a maximum of 15 digits. If the field contains more than 15 digits, Numbering will only be performed with the last 15 digits.
・Only Numbering fields will be saved in Numbering objects when printing is finished.
・If the number of characters that was fed in is less than the number of characters in the Numbering object, it may not be printed correctly.

*Numbering objects refer to text objects or bar code objects that have the Numbering function applied.

■ Others

・A maximum of 99 templates can be transferred. However, the transfer cannot be completed if the amount of data being transferred exceeds 7,168 KB (for PT-9800PCN) or 2,048 KB (for PT-9700PC).
・A single template can contain a maximum of 50 objects. When trying to transfer more than 50 objects, an error will occur and the transfer cannot be completed.
・A single template can contain a total of 1,000 lines. If it exceeds this limit, an error will occur during printing.
・The line feed codes (0D0A, 0D and 0A) in print data are read, then discarded. However, when specified as special data, such as delimiters, print start text strings or line feed commands, they are applied.
・The order of the objects is determined only by the last four-digit number of the object name. Objects with no numbers in their names will be at the end of the order. If objects have the same number, the order is determined in the following order: text, 1D bar codes, then 2D bar codes. If the objects are of the same type, the object created first is first in the order. We recommend that the numbers indicating the order be added at the end of the object name.
(To specify the name of an object in P-touch Editor, display the properties of the text or bar code object, and then specify the name in the “Object Name” box on the Expanded tab.)

Specifying the object name



- When print data is fed, the command mode should be the P-touch Template mode.
- When a template is transferred to the machine, all values specified with dynamic commands are initialized.
- This is not compatible with split labels.
- After printing from P-touch Editor, the command mode changes to raster mode. In order to print a template, select the P-touch Template mode in the P-touch Template Settings tool or, if the previous mode in the P-touch Template Settings tool was the P-touch Template mode, turn the machine off, then on again to enter P-touch Template mode.

Precautions

Static commands are valid only in raster mode.

Example: To dynamically change the template selection number to 10

1) Switch to raster mode.

   ESC i a 01h (1Bh 69h 61h 01h)

2) Select template number 10.

   ESC i X n 2 01h 00h 0Ah

   (1Bh 69h 58h 6Eh 32h 01h 00h 0Ah)

3) Dynamically enter the P-touch Template mode.

©Copyright 2010 BROTHER INDUSTRIES, LTD.

P-touch Template Command Reference

Version 1.01

Model Name: PT-9800PCN/PT-9700PC

Created by: Brother Industries, Ltd.

[Contents]

[Contents] 2
Control code list 5
Commands that can be set or obtained in P-touch Template mode 5
Commands that can be set or obtained in raster mode 6
About P-touch Template 8
Static and dynamic commands 8
If printing does not begin (main most frequent causes) 8
Control command details 9
^PT Select print start trigger 9
^PS Specify print start command text string 10
^PC Specify print start received character count 11
^SS Specify delimiter 12
^TS Select template 13
^CF Full cut setting 14
^CH Half cut setting 15
^CP Chain printing setting 16
^MP Mirror printing setting 17
^SP Special tape setting 18
^LS Specify line spacing with line feed 19
^CC Change prefix character 20
^RC Specify line feed command text string 21
^CN Specify number of copies 22
^NN Specify number of Numbering copies 23
^ID Initialize template data 24
^QV Specify QR Code version 25
^FC FNC1 replacement setting 26
^II Initialize 27
^OP Perform machine operations (feed/cut) 28
^S R Status request 29
^V R Retrieve version Information 33
^CR Line feed in object 33
^OS Select object (object number) 34
^ON Select object (object name) 34
^DI Directly insert object 35
ESC ia Specify command mode 35

ESC iXT2 Select print start trigger 36
ESC iXP2 Specify print start command text string 37
ESC iXr2 Specify print start received character count 38
ESC iXD2 Specify delimiter 39
ESC iXa2 Specify non-printed text strings 40
ESC iXi2 Specify command mode 41
ESC iXn2 Select template 42
ESC iXf2 Change prefix character 43
ESC iXc2 Specify machine settings (full cut option) 44
ESC iXy2 Specify machine settings (full cut option–specify cutting after specified number of labels) 45
ESC iXH2 Half cut setting 46
ESC iXM2 Mirror printing setting 47
ESC iXs2 Special tape setting 48
ESC iXm2 Select character code set 49
ESC iXj2 Specify international character set 50
ESC iXR2 Specify line feed command text string 51
ESC iXC2 Specify number of copies 52
ESC iXN2 Specify number of Numbering copies 53
ESC iXF2 FNC1 replacement setting 54
ESC iXT1 Retrieve select print start trigger items 55
ESC iXP1 Retrieve print start command setting text string 56
ESC iXr1 Retrieve print start received character count 57
ESC iXD1 Retrieve delimiter 58
ESC iXa1 Retrieve non-printed text strings 59
ESC iXi1 Retrieve command mode setting 60
ESC iXn1 Retrieve template selection number 61
ESC iXc1 Retrieves machine settings (full cut option) 62
ESC iXy1 Retrieve machine settings (full cut option–specify cutting after specified number of labels) 63
ESC iXH1 Retrieve half cut setting 64
ESC iXM1 Retrieve mirror printing setting 65
ESC iXs1 Retrieve special tape setting 66
ESC iXm1 Retrieve character code set 67
ESC iXj1 Retrieve international character set setting 68
ESC iXf1 Retrieve the prefix character 69
ESC iXR1 Retrieve line feed command setting text string 70

ESC iXC1 Retrieve number of copies setting 71
ESC iXN1 Retrieve number of Numbering copies setting 72
ESC iXF1 Retrieve FNC1 replacement setting 73
Character code table 74
Standard character code table 74
Eastern European character code table (Windows 1250) 75
Western European character code table (Windows 1252) 76
International character set table 77
Appendix: Specifications 78

Control code list

Commands that can be set or obtained in P-touch Template mode

^PT	5E 50 54	Dynamic	Select print start trigger
^PS	5E 50 53	Dynamic	Specify print start command text string
^PC	5E 50 43	Dynamic	Specify print start received character count
^SS	5E 53 53	Dynamic	Specify delimiter
^TS	5E 54 53	Dynamic	Select template
^CF	5E 43 46	Dynamic	Full cut setting
^CH	5E 43 48	Dynamic	Half cut setting
^CP	5E 43 50	Dynamic	Chain printing setting
^MP	5E 4D 50	Dynamic	Mirror printing setting
^LS	5E 4C 53		Specify line spacing with line feed
^CC	5E 43 43	Dynamic	Change prefix character
^RC	5E 52 43	Dynamic	Specify line feed command text string
^CN	5E 43 4E		Specify number of copies
^NN	5E 4E 4E		Specify number of Numbering copies
^ID	5E 49 4E		Initialize template data
^QV	5E 51 56	Dynamic	Specify QR Code version
^FC	5E 46 43	Dynamic	FNC1 replacement setting
^II	5E 49 49		Initialize
^OP	5E 4F 50		Perform machine operations (feed/cut)
^SR	5E 53 52		Status request
^VR	5E 56 52		Retrieve version Information
^CR	5E 43 52		Line feed in object
^OS	5E 4F 53		Select object (object number)
^ON	5E 4F 4E		Select object (object name)
^DI	5E 44 49		Directly insert object
ESC ia	1B 69 61	Dynamic	Specify command mode

* The commands listed above must be used in P-touch Template mode.

They cannot be used in raster mode or ESC/P mode. (except ESC ia)

Commands that can be set or obtained in raster mode

ESC iXT2	1B 69 58 54 32	Static	Select print start trigger
ESC iXP2	1B 69 58 50 32	Static	Specify print start command text string
ESC iXr2	1B 69 58 72 32	Static	Specify print start received character count
ESC iXD2	1B 69 58 44 32	Static	Specify delimiter
ESC iXa2	1B 69 58 61 32	Static	Specify non-printed text strings
ESC iXi2	1B 69 58 69 32	Static	Specify command mode
ESC iXn2	1B 69 58 6E 32	Static	Select template
ESC iXf2	1B 69 58 66 32	Static	Change prefix character
ESC iXc2	1B 69 58 63 32	Static	Specify machine settings (full cut option ON/OFF)
ESC iXy2	1B 69 58 79 32	Static	Specify machine settings (full cut option–specify cutting after specified number of labels)
ESC iXH2	1B 69 58 48 32	Static	Half cut setting
ESC iXM2	1B 69 58 4D 32	Static	Mirror printing setting
ESC iXs2	1B 69 58 73 32	Static	Special tape setting
ESC iXm2	1B 69 58 6D 32	Static	Select character code set
ESC iXj2	1B 69 58 6A 32	Static	Specify international character set
ESC iXR2	1B 69 58 52 32	Static	Specify line feed command text string
ESC iXC2	1B 69 58 43 32	Static	Specify number of copies
ESC iXN2	1B 69 58 4E 32	Static	Specify number of Numbering copies
ESC iXF2	1B 69 58 46 32	Static	FNC1 replacement setting
ESC iXT1	1B 69 58 54 31		Retrieve select print start trigger items
ESC iXP1	1B 69 58 50 31		Retrieve print start command setting text string
ESC iXr1	1B 69 58 72 31		Retrieve print start received character count
ESC iXD1	1B 69 58 44 31		Retrieve delimiter
ESC iXa1	1B 69 58 61 31		Retrieve non-printed text strings
ESC iXi1	1B 69 58 69 31		Retrieve command mode
ESC iXn1	1B 69 58 6E 31		Retrieve template selection number
ESC iXc1	1B 69 58 63 31		Retrieve machine settings (full cut option ON/OFF)
ESC iXy1	1B 69 58 79 31		Retrieve machine settings (full cut option–specify cutting after specified number

			of labels)
ESC iXH1	1B 69 58 48 31		Retrieve half cut setting
ESC iXM1	1B 69 58 4D 31		Retrieve mirror printing setting
ESC iXs1	1B 69 58 73 31		Retrieve special tape setting
ESC iXm1	1B 69 58 6D 31		Retrieve character code set setting
ESC iXj1	1B 69 58 6A 31		Retrieve international character set setting
ESC iXf1	1B 69 58 66 31		Retrieve prefix setting character
ESC iXR1	1B 69 58 52 31		Retrieve line feed command setting text string
ESC iXC1	1B 69 58 43 31		Retrieve number of copies setting
ESC iXN1	1B 69 58 4E 31		Retrieve number of Numbering copies setting
ESC iXF1	1B 69 58 46 31		Retrieve FNC1 replacement setting

* The commands listed above must be used in raster mode.

They cannot be used in ESC/P mode or P-touch Template mode.

About P-touch Template

Data can be sent from a host device (such as measuring instruments, scales and bar code readers) and printed in a template created in P-touch Editor and previously transferred to the printer.

P-touch Template commands consist of a prefix character and a two-character text string. When the prefix character is sent, the machine begins the analysis of the P-touch Template command, and performs the specified process if the following two-character text string corresponds to a command.

Static and dynamic commands

With static commands, settings specified with a command are saved and stored in the memory.

With dynamic commands, settings specified with a command are temporarily saved and applied until the machine is turned off.

If printing does not begin (main most frequent causes)

1) Incorrect communication settings
2) The command mode is not in the P-touch Template mode.
3) The conditions for the print start trigger are not met.

   The following three types of print start triggers are available, but the selection is incorrect.

   ① When the specified text string is received

   ② When all objects are filled

   ③ When the specified number of characters is received

If the settings described above are incorrect, use the P-touch Template Settings tool to specify the settings.

Control command details

^PT	Select print start trigger

[ASCII] ^ P T n

[Decimal] 94 80 84 nd

[Hexadecimal] 5E 50 54 nh

[Parameters] 1≤n≤3

[Description]

・Selects the print start trigger type.

n=1: When the specified text string is received (default)

n=2: When all objects are filled

(Prints with the delimiter at the end of the data)

n=3: When the specified number of characters is received

(not including delimiters)

・This command is a dynamic command.

[Remarks]

・Invalid if n is a value other than 1 through 3

[Example]

・When the print start trigger is “when all objects are filled”

^ P T 2 (5Eh 50h 54h 32h)

^PS Specify print start command text string

[ASCII] ^ P S n1 n2 data

[Decimal] 94 80 83 nd1 nd2 datad

[Hexadecimal] 5E 50 53 nh1 nh2 datah

[Parameters] 0≤n1≤2

0≤n2≤9

00h≤datah≤FFh

[Description]

・Specifies the text string for the print start command.

(n1*10)+n2: Length of the text string (can be set between 1 and 20)

data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

・The default text string for the print start command is “^FF”.

・This command is a dynamic command.

[Remarks]

・Invalid if more than 20 characters are specified

[Example]

・To change the text string for the print start command to “START”:

Since the text string to be specified (data), “START”, contains 5 characters, n1=0 and n2=5.

Therefore, the command will be as follows.

^ P S 0 5 S T A R T

(5Eh 50h 53h 30h 35h 53h 54h 41h 52h 54h)

^PC Specify print start received character count

[ASCII] ^ P C n1 n2 n3

[Decimal] 94 80 67 nd1 nd2 nd3

[Hexadecimal] 5E 50 43 nh1 nh2 nh3

[Parameters] 0≤n1≤9

0≤n2≤9

0≤n3≤9

[Description]

・Specifies the number of characters to be received in order to start printing.

(n1*100)+(n2*10)+n3: Print start received character count

(1 to 999 characters)

・The default print start received character count is 10.

・This command is a dynamic command.

・One full-width character is treated as 2 bytes, and one half-width character is treated as 1 byte.

[Example]

・To change the print start received character count to 100 characters: Since n1=1, n2=0 and n3=0, the command will be as follows.

^ P C 1 0 0 (5Eh 50h 43h 31h 30h 30h)

^SS Specify delimiter

[ASCII] ^ S S n1 n2 data

[Decimal] 94 83 83 nd1 nd2 datad

[Hexadecimal] 5E 53 53 nh1 nh2 datah

[Parameters] 0≤n1≤2

0≤n2≤9

00h≤datah≤FFh

[Description]

・The delimiter is used to indicate when to move to the next object in data that is being sent.

・Specifies the text string for the delimiter.

(n1*10)+n2: Length of the text string (between 1 and 20)

data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

・The default text string for the delimiter is “09h” (TAB code).

・A text string that will not appear in the print data should be specified.

・This command is a dynamic command.

[Remarks]

・Invalid if more than 20 characters are specified

[Example]

・To change the delimiter to “,” (0x2C):

Since the text string contains one character, n1=1 and n2=1 and, with the text string (datah) “,” (2Ch), the command will be as follows.

^ S S 0 1 , (5Eh 53h 53h 30h 31h 2Ch)

^TS Select template

[ASCII] ^ T S n1 n2 n3

[Decimal] 94 84 83 nd1 nd2 nd3

[Hexadecimal] 5E 54 53 nh1 nh2 nh3

[Parameters] n1: 0 (Fixed)

0≤n2≤9

0≤n3≤9

[Description]

・Specifies the number of the template selected from the machine.

(n2*10)+n3: Template number (1 to 99)

・The default selection number is 1.

・This command is a dynamic command.

[Remarks]

・The template numbers that can be set are between 1 and 99. This command becomes invalid if any other value has been specified or if the number that has been specified is for a template not transferred to the machine.

・All data already fed in, selected objects and the search text are initialized.

[Example]

・To select template number 99:

Since n2=9 and n3=9, the command will be as follows.

^ T S 0 9 9 (5Eh 54h 53h 30h 39h 39h)

^CF Full cut setting

[ASCII] ^ C F n1 n2

[Decimal] 94 67 70 nd1 nd2

[Hexadecimal] 5E 43 46 nh1 nh2

[Parameters] 0≤n1≤9

0≤n2≤9

[Description]

・Specifies whether or not full cut is used, and specifies the number of copies.

(n1*10)+n2: Full cut and number of copies settings

(00: OFF; 01 to 99: Number of copies)

(Default value: 01)

・This command is a dynamic command.

[Remarks]

・The full cut label number setting can be between 1 and 99. This command becomes invalid if any other value has been specified.

[Example]

・To cut after every two labels:

Since the auto cut label number will be set to 2, n1=0 and n2=2. Therefore, the command will be as follows.

^ C F 0 2

(5Eh 43h 46h 30h 32h)

^CH Half cut setting

[ASCII] ^ C H n

[Decimal] 94 67 72 nd

[Hexadecimal] 5E 43 48 nh

[Parameters] 0≤n≤1

[Description]

・Specifies whether or not half cut is used.

n: Half cut setting

(ON: 1 (default); OFF: 0)

・This command is a dynamic command.

[Remarks]

・Invalid if n is a value other than 1 or 0

[Example]

・To make half cuts:

Since half cuts will be enabled, n=1. Therefore, the command will be as follows.

^ C H 1

(5Eh 43h 48h 31h)

^CP Chain printing setting

[ASCII] ^ C P n

[Decimal] 94 67 80 nd

[Hexadecimal] 5E 43 50 nh

[Parameters] 0≤n≤1

[Description]

・Specifies whether or not chain printing is applied.

n: Chain printing setting

(OFF: 0 (default); ON: 1)

・This command is a dynamic command.

[Remarks]

・Invalid if n is a value other than 1 or 0

[Example]

・To use chain printing:

Since chain printing will be enabled, n=1. Therefore, the command will be as follows.

^ C P 1

(5Eh 43h 50h 31h)

^MP	Mirror printing setting

[ASCII] ^ M P n

[Decimal] 94 77 80 nd

[Hexadecimal] 5E 4D 50 nh

[Parameters] 0≤n≤1

[Description]

・Specifies whether or not mirror printing is applied.

n: Mirror printing setting

(OFF: 0 (default); ON: 1)

・This command is a dynamic command.

[Remarks]

・Invalid if n is a value other than 1 or 0

[Example]

・To use mirror printing:

Since mirror printing will be enabled, n=1. Therefore, the command will be as follows.

^ M P 1

(5Eh 4Dh 50h 31h)

^SP	Special tape setting

[ASCII] ^ S P n

[Decimal] 94 83 80 nd

[Hexadecimal] 5E 53 50 nh

[Parameters] 0≤n≤1

[Description]

・Specifies whether or not the special tape setting is enabled.

When the special tape setting is ON, the cut settings and chain printing setting are not available (same as being OFF). When the special tape setting is OFF, the cut settings and chain printing setting are applied as specified.

n: Special tape setting
(OFF: 0 (default); ON: 1)

・This command is a dynamic command.

[Remarks]

・Invalid if n is a value other than 1 or 0

[Example]

・To use the special tape setting:

Since the special tape setting will be enabled, n=1. Therefore, the command will be as follows.

^ S P 1

(5Eh 53h 50h 31h)

^LS	Specify line spacing with line feed

[ASCII] ^ L S n1 n2 n3

[Decimal] 94 76 83 nd1 nd2 nd3

[Hexadecimal] 5E 4C 53 nh1 nh2 nh3

[Parameters] 0≤n1≤2

0≤n2≤9

0≤n3≤9

[Description]

・Specifies the number of dots for the line spacing when a line feed is entered.

(n1*100)+(n2*10)+n3 : Number of dots for the line spacing (0 to 255)

・The default number of dots for the line spacing when a line feed is entered is the number of dots determined when the template is created in P-touch Editor.

[Remarks]

・The number of dots for the line spacing can be between 0 and 255. This command becomes invalid if any other value has been specified.

1 dot = 1/360 inch

1 dot ≈ 0.071 mm

[Example]

・To set the line spacing to 10 dots:

^ L S 0 1 0 (5Eh 4Ch 53h 30h 31h 30h)

^CC Change prefix character

[ASCII] ^ C C n

[Decimal] 94 67 67 nd

[Hexadecimal] 5E 43 43 nh

[Parameters] 00h≤nh≤FFh

[Description]

・Changes the prefix character code.

n: Character code

・The default text string for the prefix character is “^”.

・This command is a dynamic command.

[Example]

・To change the prefix character from “^” to “_”, send the command shown below.

^ C C 5Fh (5Eh 43h 43h 5Fh)

(“_”)

・However, since the prefix character remains set to “_” if the machine is not later turned off, then on, the initialize command, for example, will be “_II” instead of “^II”.

^RC Specify line feed command text string

[ASCII] ^ R C n1 n2 data

[Decimal] 94 82 67 nd1 nd2 datad

[Hexadecimal] 5E 52 43 nh1 nh2 datah

[Parameters] 0≤n1≤2

0≤n2≤9

00h≤datah≤FFh

[Description]

・Specifies the text string for the line feed command.

(n1*10)+n2: Length of the text string (can be set between 1 and 20)

data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

・The default text string for the line feed command is “^CR”.

・This command is a dynamic command.

[Remarks]

・Invalid if more than 20 characters are specified

[Example]

・To change the text string for the line feed command to “0Dh 0Ah”:

Since the text string to be specified (data) contains 2 characters, n1=0 and n2=2. Therefore, the command will be as follows.

^ R C 0 2 0Dh 0Ah

(5Eh 52h 43h 30h 32h 0Dh 0Ah)

^CN Specify number of copies

[ASCII] ^ C N n1 n2 n3

[Decimal] 94 67 78 nd1 nd2 nd3

[Hexadecimal] 5E 43 4E nh1 nh2 nh3

[Parameters] 0≤n1≤9

0≤n2≤9

0≤n3≤9

[Description]

・Specifies the number of copies to be printed.

(n1*100)+(n2*10)+n3: Number of copies (bytes)

(1 to 999)

・The default number of copies is 1.

[Remarks]

・When printing is finished, the number of copies specified with this command returns to the number of copies (static value) specified from the machine.

[Example]

・To change the number of copies to 100: Since n1=1, n2=0 and n3=0, the command will be as follows.

^ C N 1 0 0 (5Eh 43h 4Eh 31h 30h 30h)

^NN Specify number of Numbering copies

[ASCII] ^ N N n1 n2 n3

[Decimal] 94 78 78 nd1 nd2 nd3

[Hexadecimal] 5E 4E 4E nh1 nh2 nh3

[Parameters] 0≤n1≤9

0≤n2≤9

0≤n3≤9

[Description]

・Specifies the number of copies to be printed with Numbering.

(n1*100)+(n2*10)+n3: Number of Numbering copies (bytes)

(1 to 999)

・The default number of copies printed with Numbering is 1.

[Remarks]

・When printing is finished, the number of copies specified with this command returns to the number of copies (static value) specified from the machine.

[Example]

・To change the number of Numbering copies to 100: Since n1=1, n2=0 and n3=0, the command will be as follows.

^ N N 1 0 0 (5Eh 4Eh 4Eh 31h 30h 30h)

^ID	Initialize template data

[ASCII] ^ I D

[Decimal] 94 73 68

[Hexadecimal] 5E 49 44

[Parameters] None

[Description]

・Returns the data in the selected template to what it was when the template was transferred.

^QV Specify QR Code version

[ASCII] ^ Q V n1 n2

[Decimal] 94 81 86 nd1 nd2

[Hexadecimal] 5E 51 56 nh1 nh2

[Parameters] 0≤n1≤9

0≤n2≤9

[Description]

・Specifies the QR code version.

(n1*10)+n2: Version number (between 0 and 40)

・The default QR code version is 0.

・This command becomes invalid if a value other than those that can be set (between 0 and 40) has been specified.

・This command is a dynamic command.

・If the print range is exceeded, the bar code is not printed.

[Example]

・To change the version to 10: Since n1=1 and n2=0, the command will be as follows.

^ Q V 1 0 (5Eh 51h 56h 31h 30h)

^FC FNC1 replacement setting

[ASCII] ^ F C n

[Decimal] 94 70 67 nd

[Hexadecimal] 5E 46 43 nh

[Parameters] 0≤n≤1

[Description]

・This command selects whether or not GS codes, which are included in bar code protocols such as GS1-128 (UCC/EAN-128), are replaced with FNC1 codes.

n: FNC1 replacement setting
(ON: 1; OFF: 0 (default))

・This command is a dynamic command.

[Remarks]

・Invalid if n is a value other than 1 or 0

[Example]

・To disable FNC1 replacement:
Since FNC1 replacement will be disabled, n=0. Therefore, the command will be as follows.
^ F C 0
(5Eh 46h 43h 30h)

^II	Initialize

[ASCII] ^ I I

[Decimal] 94 73 73

[Hexadecimal] 5E 49 49

[Parameters] None

[Description]

・Reverts all dynamic settings to the machine settings.

1) Select print start trigger
2) Specify print start command text string
3) Specify print start received character count
4) Delimiter setting
5) Select template
6) Full cut setting
7) Half cut setting
8) Chain printing setting
9) Mirror printing setting
10) Special tape setting
11) Change prefix character
12) Specify line feed command text string
13) Specify number of copies
14) Specify QR Code version
15) FNC1 replacement setting

[Remarks]

・All data already fed in, selected objects and the search text are initialized.

^OP Perform machine operations (feed/cut)

[ASCII] ^ O P n

[Decimal] 94 79 80 nd

[Hexadecimal] 5E 4F 50 nh

[Parameters] n=4

[Description]

・Causes the machine to perform a feed and cut operation.

n = 4 : Performs the feed and cut operation

[Remarks]

・Invalid if n is a value other than 4

[Example]

・To specify that the machine performs a feed and cut operation:

^ O P 4 (5Eh 4Fh 50h 34h)

^S R Status request

[ASCII] ^ S R

[Decimal] 94 83 82

[Hexadecimal] 5E 53 52

[Parameters] None

[Description]

・The printer status is returned.

The printer status consists of 32 bytes.

Order	Offset	Size	Name	Value/Reference
1	0	1	Print head mark	Fixed at 80H
2	1	1	Size	Fixed at 20H
3	2	1	Brother code	Fixed at “B” (42H)
4	3	1	Series code	Fixed at “0” (30H)
5	4	1	Model code	“a” (61H) (*1)
				“b” (61H) (*2)
6	5	1	Country code	Fixed at “0” (30H)
7	6	1	Main unit information	Fixed at 00H
8	7	1	Reserved	Fixed at 00H
9	8	1	Error information 1	See below.
10	9	1	Error information 2	See below.
11	10	1	Media width	See below.
12	11	1	Media type	See below.
13	12	1	Number of colors	Fixed at 00H
14	13	1	Internal font information	Fixed at 00H
15	14	1	Internal Japanese font information	Fixed at 00H
16	15	1	Mode	Fixed at 00H
17	16	1	Density	Fixed at 00H
18	17	1	Media length	
19	18	1	Status type	See below.
20	19	1	Phase type	See below.
21	20	1	Phase number (upper byte)	Fixed at 00H
22	21	1	Phase number (lower byte)	Fixed at 00H

23	22	1	Notification number	Not used
24	23	1	Expansion section (number of bytes)	Fixed at 00H
25	24	8	Reserved	Fixed at 00H

(*1) With PT-9800PCN

(*2) With PT-9700PC

Error information 1

Flag	Mask	Definition
Bit 0	0x01	"No media” error
Bit 1	0x02	“End of media” error
Bit 2	0x04	“Cutter jam” error
Bit 3	0x08	Not used
Bit 4	0x10	Not used
Bit 5	0x20	Machine turned off
Bit 6	0x40	Not used
Bit 7	0x80	Not used

Error information 2

Flag	Mask	Definition
Bit 0	0x01	“Replace media” error
Bit 1	0x02	“Expansion buffer full” error
Bit 2	0x04	Communication error
Bit 3	0x08	Not used
Bit 4	0x10	“Cover open” error
Bit 5	0x20	“Print head overheating” error
Bit 6	0x40	Not used
Bit 7	0x80	System error

Media width

Media width	Value	Remarks
No tape	00H	
6-mm-wide tape	06H	
9-mm-wide tape	09H	
12-mm-wide tape	0CH	
18-mm-wide tape	12H	
24-mm-wide tape	18H	
36-mm-wide tape	24H	
3.5-mm-wide tape	04H	

Media type

Media type	Value	Remarks
No tape	00H	
Lettering tape	02H	
Laminated tape	01H	
KP (thermal) tape	03H	
Non-laminated tape	03H	
HG tape	09H	
Incompatible tape	FFH	

Status type

Status type	Value
Reply to status request	00H
Printing completed	01H
Error occurred	02H
Not used	03H
Not used	04H
Notification	05H
Phase change	06H
Not used	07H to EFH
Send advanced data	F0H
Not used	F1H to FFH

Phase type

Phase type	Value
Reception possible	00H
Printing	01H

^V R Retrieve version Information

[ASCII] ^ V R

[Decimal] 94 86 82

[Hexadecimal] 5E 56 52

[Parameters] None

[Description]

・Retrieves the version information for the machine as a 16-character text string.

^CR Line feed in object

[ASCII] ^ C R

[Decimal] 94 67 82

[Hexadecimal] 5E 43 52

[Parameters] None

[Description]

・Adds a return to the next line in the text object.

・Valid even if the text string for the line feed command has been changed

[Example]

・To print three lines:

1 ^ C R 2 ^ C R 3 ^ F F

(31h 5Eh 43h 52h 32h 5Eh 43h 52h 33h

5Eh 46h 46h)

Print result

1
2
3

^OS Select object (object number)

[ASCII] ^ O S n1 n2

[Decimal] 94 79 83 nd1 nd2

[Hexadecimal] 5E 4F 53 nh1 nh2

[Parameters] 0≤n1≤5

0≤n2≤9

[Description]

・Selects an object by its object number.

(n1*10)+n2: Object number (1 to 50)

[Remarks]

・The object number can be set between 1 and 50. This command becomes invalid if any other value has been specified.

・Use this command to insert data starting with an intermediary object.

[Example]

・To select the 33rd object:

^ O S 3 3 (5Eh 4Fh 53h 33h 33h)

^ON Select object (object name)

[ASCII] ^ O N data 00

[Decimal] 94 79 78 datad 00

[Hexadecimal] 5E 4F 4E datah 00

[Parameters] None

[Description]

・Selects an object by its object name.

data: Text string (object name)

[Remarks]

・The maximum length of text that can be set is 20 characters. If text longer than this has been specified, the command becomes invalid. In addition, the command becomes invalid if no text has been specified.

・“00h” should be added at the end of the text. This indicates the end of the text.

・Use this command to insert data starting with an intermediary object.

[Example]

・To select an object with the name “TEXT1”:

^ O N T E X T 1 00h

(5Eh 4Fh 4Eh 54h 45h 58h 54h 31h 00h)

^DI Directly insert object

[ASCII] ^ D I n1 n2 data

[Decimal] 94 68 73 nd1 nd2 datad

[Hexadecimal] 5E 44 49 nh1 nh2 datah

[Parameters] 00h≤nh1≤FFh

00h≤nh2≤FEh

[Description]

・Inserts a text string for the specified number of characters into the object selected in the selected template. (If even a print command or delimiter is within the specified number of characters, they are treated as data.)

(nh2*256)+nh1: Specified number of characters (bytes)

data: Text string

[Example]

・If “A” is specified as the print start text string, and the print start trigger is specified as the print start text string, simply print “A” by printing with the following command.

^ D I 03h 00h 1 A 2 A

(5Eh 44h 49h 03h 00h 31h 41h 32h 41h)

Print result

1A2

ESC ia Specify command mode

[ASCII] ESC i a n

[Decimal] 27 105 97 nd

[Hexadecimal] 1B 69 61 nh

[Parameters] nh=00h 01h 03h 30h 31h 33h

[Description]

・Switches the mode.

nh=00h or 30h: ESC/P mode (default)

nh=01h or 31h: Raster mode

nh=03h or 33h: P-touch Template mode

・This command is a dynamic command.

[Remarks]

If the specified value is one other than those that can be set, raster mode will be entered.

ESC iXT2	Select print start trigger

[ASCII] ESC i X T 2 n1 n2 n3

[Decimal] 27 105 88 84 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 54 32 nh1 nh2 nh3

[Parameters] nh1=01h (fixed)

nh2=00h (fixed)

00h≤nh3≤02h

[Description]

・Selects the print start trigger type.

nh3=00h: When the specified text string is received (default)

nh3=01h: When all objects are filled

(Prints with the delimiter at the end of the data)

nh3=02h: When the specified number of characters is received

(not including delimiters)

・This command is a static command.

[Remarks]

・Invalid if nh3 is a value other than 00h through 02h

[Example]

・When the print start trigger is “when all objects are filled”

ESC i X T 2 01h 00h 01h

(1Bh 69h 58h 54h 32h 01h 00h 01h)

ESC iXP2	Specify print start command text string

[ASCII] ESC i X P 2 n1 n2 data

[Decimal] 27 105 88 80 50 nd1 nd2 datad

[Hexadecimal] 1B 69 58 50 32 nh1 nh2 datah

[Parameters] 01h≤nh1≤14h

nh2: 00h (fixed)

00h≤datah≤FFh

[Description]

・Specifies the text string for the print start command.

nh1+(nh2*256): Length of the text string (can be set between 1 and 20)

data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

・The default text string for the print start command is “^FF”.

・This command is a static command.

[Remarks]

・Invalid if more than 20 characters are specified

[Example]

・To change the text string for the print start command to “START”:

Since the text string to be specified (data), “START”, contains 5 characters, nh1=05h and nh2=00h. Therefore, the command will be as follows.

ESC i X P 2 05h 00h S T A R T

(1Bh 69h 58h 50h 32h 05h 00h 53h 54h 41h 52h 54h)

ESC iXr2	Specify print start received character count

[ASCII] ESC i X r 2 n1 n2 n3 n4

[Decimal] 27 105 88 114 50 nd1 nd2 nd3 nd4

[Hexadecimal] 1B 69 58 72 32 nh1 nh2 nh3 nh4

[Parameters] nh1: 02h (fixed)

nh2: 00h (fixed)

00h≤nh3≤FFh

00h≤nh4≤03h

[Description]

・Specifies the number of characters to be received in order to start printing.
nh3+(nh4*256): Print start received character count (bytes) (1 to 999)

・The default print start received character count is 10.

・This command is a static command.

[Example]

・To change the print start received character count to 100 characters: Since nh3=64h and nh4=00h, the command will be as follows.
ESC i X r 2 02h 00h 64h 00h

(1Bh 69h 58h 72h 32h 02h 00h 64h 00h)

ESC iXD2	Specify delimiter

[ASCII] ESC i X D 2 n1 n2 data

[Decimal] 27 105 88 68 50 nd1 nd2 datad

[Hexadecimal] 1B 69 58 44 32 nh1 nh2 datah

[Parameters] 01h≤nh1≤14h

nh2: 00h (fixed)

00h≤datah≤FFh

[Description]

・The delimiter is used to indicate when to move to the next object in data that is being sent.

・Specifies the text string for the delimiter.

nh1+(nh2*256): Length of the text string (between 1 and 20)

data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

・The default text string for the delimiter is “09h” (TAB code).

・This command is a static command.

[Remarks]

・Invalid if more than 20 characters are specified

[Example]

・To change the delimiter to “,” (2Ch):

Since the text string contains one character, nh1=01h and nh2=00h and, with the text string (datah) “,” (2Ch), the command will be as follows.

ESC i X D 2 01h 00h 2Ch

(1Bh 69h 58h 44h 32h 01h 00h 2Ch)

ESC iXa2	Specify non-printed text strings

[ASCII] ESC i X a 2 n1 n2 n3 data

[Decimal] 27 105 88 97 50 nd1 nd2 nd3 datad

[Hexadecimal] 1B 69 58 61 32 nh1 nh2 nh3 datah

[Parameters] 01h≤nh1≤15h

nh2: 00h (fixed)

nh3: 01h (fixed)

00h≤datah≤FFh

[Description]

・Specifies the non-printed text string.

nh1+(nh2*256): Length of the text string (0 to 20) + 1

data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

・This command is a static command.

[Remarks]

・Invalid if more than 20 characters are specified

[Example]

・To specify the non-printed text string as “ABCD”:

Since the text string contains four characters, nh1=05h and nh2=00h, and then the command will be as follows.

ESC i X a 2 05h 00h 01h A B C D

(1Bh 69h 58h 61h 32h 05h 00h 01h 41h 42h 43h 44h)

ESC iXi2	Specify command mode

[ASCII] ESC i X i 2 n1 n2 n3

[Decimal] 27 105 88 105 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 69 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 00h 01h 03h

[Description]

・Switches the mode.

nh3=00h: ESC/P mode (default)

nh3=01h: Raster mode

nh3=03h: P-touch Template mode

・This command is a static command.

[Remarks]

Invalid if the specified value is any other than those that can be set

ESC iXn2	Select template

[ASCII] ESC i X n 2 n1 n2 n3

[Decimal] 27 105 88 110 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 6E 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

01h≤nh3≤63h

[Description]

・Specifies the number of the template selected from the machine.

n3: Template number (1 to 99)

・The default selection number is 1.

・This command is a static command.

[Remarks]

・The template numbers that can be set are between 1 and 99. This command becomes invalid if any other value has been specified or if the number that has been specified is of a template not transferred to the machine.

[Example]

・To select template number 99:

Since nh3=63h, the command will be as follows.

ESC i X n 2 01h 00h 63h

(1Bh 69h 58h 6Eh 32h 01h 00h 63h)

ESC iXf2	Change prefix character

[ASCII] ESC i X f 2 n1 n2 n3

[Decimal] 27 105 88 102 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 66 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

00h≤nh3≤FFh

[Description]

・Changes the prefix character code.

n3: Character code

・The default text string for the prefix character is “^”.

・This command is a static command.

[Example]

・To change the prefix character to “_”:

ESC i X f 2 01h 00h 5Fh (“_”)

(1Bh 69h 58h 66h 32h 01h 00h 5Fh)

ESC iXc2	Specify machine settings (full cut option)

[ASCII] ESC i X c 2 n1 n2 n3

[Decimal] 27 105 88 99 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 63 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 00h 01h 08h 09h

[Description]

・Specifies the various cut options.

nh3=00h: Full cut setting OFF, chain printing setting ON

nh3=01h: Full cut setting ON, chain printing setting ON

nh3=08h: Full cut setting OFF, chain printing setting OFF

nh3=09h: Full cut setting ON, chain printing setting ON

・This command is a static command.

[Example]

・To select full cut setting ON and chain printing setting ON:

ESC i X c 2 01h 00h 01h

(1Bh 69h 58h 63h 32h 01h 00h 01h)

ESC iXy2	Specify machine settings (full cut option–specify cutting after specified number of labels)

[ASCII] ESC i X y 2 n1 n2 n3

[Decimal] 27 105 88 121 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 79 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

01h≤nh3≤63h

[Description]

・Specifies that the tape will be cut after the specified number of labels. (If the full cut setting is ON, the tape will be cut after the number of labels specified with this setting.)

nh3: Makes a full cut after a specified number of labels (00h to 63h)

・This command is a static command.

[Remarks]

・The full cut label number setting can be between 1 and 99. This command becomes invalid if any other value has been specified.

[Example]

・To cut after every five labels (However, the full cut setting must be ON.)

ESC i X y 2 01h 00h 05h

(1Bh 69h 58h 79h 32h 01h 00h 05h)

ESC iXH2	Half cut setting

[ASCII] ESC i X H 2 n1 n2 n3

[Decimal] 27 105 88 72 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 48 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 00h 01h

[Description]

・Specifies whether or not half cut is used.

nh3=00h: Half cut setting OFF

nh3=01h: Half cut setting ON

・This command is a static command.

[Example]

・To make half cuts:

ESC i X H 2 01h 00h 01h

(1Bh 69h 58h 48h 32h 01h 00h 01h)

ESC iXM2	Mirror printing setting

[ASCII] ESC i X M 2 n1 n2 n3

[Decimal] 27 105 88 77 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 4D 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 00h 01h

[Description]

・Specifies whether or not mirror printing is applied.

nh3=00h: Mirror printing setting OFF

nh3=01h: Mirror printing setting ON

・This command is a static command.

[Example]

・To apply mirror printing:

ESC i X M 2 01h 00h 01h

(1Bh 69h 58h 4Dh 32h 01h 00h 01h)

ESC iXs2	Special tape setting

[ASCII] ESC i X s 2 n1 n2 n3

[Decimal] 27 105 88 115 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 73 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 00h 01h

[Description]

・Specifies whether or not the special tape setting is enabled.

When the special tape setting is ON, the cut settings and chain printing setting are not available (same as being OFF). When the special tape setting is OFF, the cut settings and chain printing setting are applied as specified.

nh3=00h: Special tape setting OFF

nh3=01h: Special tape setting ON

・This command is a static command.

[Example]

・To use the special tape setting:

ESC i X s 2 01h 00h 01h

(1Bh 69h 58h 73h 32h 01h 00h 01h)

ESC iXm2	Select character code set

[ASCII] ESC i X m 2 n1 n2 n3

[Decimal] 27 105 88 109 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 6D 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 00h 01h 02h

[Description]

・Selects the character code set. (For details on the character code sets, refer to the character code tables.)

nh3=00h: Brother standard

nh3=01h: Windows 1250 (Eastern Europe)

nh3=02h: Windows 1252 (Western Europe)

・Invalid if nh3 is set to a value other than 00h through 02h

・This command is a static command.

[Example]

・To set the character code set to the Brother standard:

ESC i X m 2 01h 00h 00h

(1Bh 69h 58h 6Dh 32h 01h 00h 00h)

ESC iXj2	Specify international character set

[ASCII] ESC i X j 2 n1 n2 n3

[Decimal] 27 105 88 106 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 6A 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

00h≤nh3≤0Dh、40h

[Description]

・Selects the character set for the country, and switches some character codes in the code table according to the value of nh3.

nh3=00h: USA

nh3=01h: France

nh3=02h: Germany

nh3=03h: UK

nh3=04h: Denmark

nh3=05h: Sweden

nh3=06h: Italy

nh3=07h: Spain

nh3=08h: Japan

nh3=09h: Norway

nh3=0Ah: Denmark II

nh3=0Bh: Spain II

nh3=0Ch: Latin America

nh3=0Dh: Korea

nh3=40h: Legal

・The following 12 codes are changed.

23h 24h 40h 5Bh 5Ch 5Dh 5Eh 60h 7Bh 7Ch 7Dh 7Eh

(For the characters that are switched, refer to the international character set table.)

・The default setting is nh3=00h (USA).

・This command is a static command.

[Example]

・To change the international character setting to that for Japan:

ESC i X j 2 01h 00h 08h

(1Bh 69h 58h 6Ah 32h 01h 00h 08h)

ESC iXR2	Specify line feed command text string

[ASCII] ESC i X R 2 n1 n2 data

[Decimal] 27 105 88 82 50 nd1 nd2 datad

[Hexadecimal] 1B 69 58 52 32 nh1 nh2 datah

[Parameters] 01h≤nh1≤14h

nh2: 00h (fixed)

00h≤datah≤FFh

[Description]

・Specifies the text string for the line feed command.

nh1+(nh2*256): Length of the text string (can be set between 1 and 20)

data: Text string (The maximum number of characters that can be set is 20 characters (bytes).)

・The default text string for the line feed command is “^CR”.

・This command is a static command.

[Remarks]

・Invalid if more than 20 characters are specified

[Example]

・To change the text string for the line feed command to “0Dh 0Ah”:

Since the text string to be specified (data), contains 2 characters, nh1=02h and nh2=00h. Therefore, the command will be as follows.

ESC i X R 2 02h 00h 0Dh 0Ah

(1Bh 69h 58h 52h 32h 02h 00h 0Dh 0Ah)

ESC iXC2	Specify number of copies

[ASCII] ESC i X C 2 n1 n2 n3 n4

[Decimal] 27 105 88 67 50 nd1 nd2 nd3 nd4

[Hexadecimal] 1B 69 58 43 32 nh1 nh2 nh3 nh4

[Parameters] nh1: 02h (fixed)

nh2: 00h (fixed)

00h≤nh3≤FFh

00h≤nh4≤03h

[Description]

・Specifies the number of copies to be printed.
nh3+(nh4*256):Number of copies (bytes) (1 to 999)

・The default number of copies is 1.

・This command is a static command.

[Example]

・To change the number of copies to 100: Since nh3=64h and nh4=00h, the command will be as follows.
ESC i X C 2 02h 00h 64h 00h

(1Bh 69h 58h 43h 32h 02h 00h 64h 00h)

ESC iXN2	Specify number of Numbering copies

[ASCII] ESC i X N 2 n1 n2 n3 n4

[Decimal] 27 105 88 78 50 nd1 nd2 nd3 nd4

[Hexadecimal] 1B 69 58 4E 32 nh1 nh2 nh3 nh4

[Parameters] nh1: 02h (fixed)

nh2: 00h (fixed)

00h≤nh3≤FFh

00h≤nh4≤03h

[Description]

・Specifies the number of copies to be printed with Numbering.
nh3+(nh4*256): Number of Numbering copies (bytes) (1 to 999)

・The default number of copies printed with Numbering is 1.

・This command is a static command.

[Example]

・To change the number of Numbering copies to 100: Since nh3=64h and nh4=00h, the command will be as follows.
ESC i X N 2 02h 00h 64h 00h

(1Bh 69h 58h 4Eh 32h 02h 00h 64h 00h)

ESC iXF2	FNC1 replacement setting

[ASCII] ESC i X F 2 n1 n2 n3

[Decimal] 27 105 88 70 50 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 46 32 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 00h 01h

[Description]

・This command selects whether or not GS codes, which are included in bar code protocols such as GS1-128 (UCC/EAN-128), are replaced with FNC1 codes.

nh3=00h: FNC1 replacement setting OFF

nh3=01h: FNC1 replacement setting ON

・This command is a static command.

[Example]

・To disable FNC1 replacement:

ESC i X F 2 01h 00h 00h

(1Bh 69h 58h 46h 32h 01h 00h 00h)

ESC iXT1	Retrieve select print start trigger items

[ASCII] ESC i X T 1 n1 n2

[Decimal] 27 105 88 84 49 nd1 nd2

[Hexadecimal] 1B 69 58 54 31 nh1 nh2

[Parameters] nh1=00h (fixed)

nh2=00h (fixed)

[Description]

・The print start trigger is returned as 3-byte data.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h: When the specified text string is received

01h: When all objects are filled

02h: When the specified number of characters is received

・The retrieved value is a value specified by a static command.

[Example]

・The print start trigger specified for the machine is retrieved. When the setting is “When the specified text string is received”:

ESC i X T 1 00h 00h

(1Bh 69h 58h 54h 31h 00h 00h)

01h 00h 00h is returned from the machine.

ESC iXP1	Retrieve print start command setting text string

[ASCII] ESC i X P 1 n1 n2

[Decimal] 27 105 88 80 49 nd1 nd2

[Hexadecimal] 1B 69 58 50 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the text string specified for the print start command.

・3- to 22-byte data is returned from the machine. (Varies depending on the length of the text string)

[1, 2]: nh1 nh2 (number of characters) nh1 + (nh2*256)

[3 and later]: Text string

・The retrieved value is a value specified by a static command.

[Example]

・When the text string for the print start command is specified as “START”:

If the command ESC i X P 1 00h 00h (1Bh 69h 58h 50h 31h 00h 00h) is sent,

05h 00h S T A R T (05h 00h 53h 54h 41h 52h 54h) is returned from the machine.

ESC iXr1	Retrieve print start received character count

[ASCII] ESC i X r 1 n1 n2

[Decimal] 27 105 88 114 49 nd1 nd2

[Hexadecimal] 1B 69 58 72 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the number of characters specified to be received to start printing.

・4-byte data is returned from the machine.

[1]: 02h (fixed)

[2]: 00h (fixed)

[3, 4]: nh3 nh4 settings

nh3+(nh4*256): Print start received character count

・The retrieved value is a value specified by a static command.

[Example]

・For a print start received character count of 500 characters:

If the command ESC i X 4 1 00h 00h (1Bh 69h 58h 72h 31h 00h 00h) is sent to the machine, 02h 00h F4h 01h is returned from the machine. 244 (F4h) + (1 (01h) * 256) = 500 characters

ESC iXD1	Retrieve delimiter

[ASCII] ESC i X D 1 n1 n2

[Decimal] 27 105 88 68 49 nd1 nd2

[Hexadecimal] 1B 69 58 44 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the text string specified for the delimiter.

・3- to 22-byte data is returned from the machine. (Varies depending on the length of the text string)

[1, 2]: nh1 nh2 (number of characters) nh1 + (nh2*256)

[3 and later]: Text string

・The retrieved value is a value specified by a static command.

[Example]

・When the delimiter is set as “,” (2Ch):

The command ESC i X D 1 00h 00h (1Bh 69h 58h 44h 31h 00h 00h) is sent to the machine.

01h 00h , (01h 00h 2Ch) is returned from the machine.

ESC iXa1	Retrieve non-printed text strings

[ASCII] ESC i X a 1 n1 n2 n3

[Decimal] 27 105 88 97 49 nd1 nd2 nd3

[Hexadecimal] 1B 69 58 61 31 nh1 nh2 nh3

[Parameters] nh1: 01h (fixed)

nh2: 00h (fixed)

nh3: 01h (fixed)

[Description]

・Retrieves the specified non-printed text string.

・2- to 22-byte data is returned from the machine. (Varies depending on the length of the text string)

[1, 2]: nh1 nh2 (number of characters) nh1 + (nh2*256)

[3 and later]: Text string

・The retrieved value is a value specified by a static command.

[Example]

・When “ABCD” is specified as the non-printed text string:

The following command is sent to the machine.

ESC i X a 1 01h 00h 01h

(1Bh 69h 58h 61h 31h 01h 00h 01h)

The following is returned from the machine.

04h 00h A B C D (04h 00h 41h 42h 43h 44h)

ESC iXi1	Retrieve command mode setting

[ASCII] ESC i X i 1 n1 n2

[Decimal] 27 105 88 105 49 nd1 nd2

[Hexadecimal] 1B 69 58 69 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the setting for the command mode.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h: ESC/P mode

01h: Raster mode

03h: P-touch Template mode

・The retrieved value is a value specified by a static command.

[Example]

When the setting is for raster mode:

ESC i X i 1 00h 00h

(1Bh 69h 58h 69h 31h 00h 00h)

The following is returned from the machine.

01h 00h 01h

ESC iXn1	Retrieve template selection number

[ASCII] ESC i X n 1 n1 n2

[Decimal] 27 105 88 110 49 nd1 nd2

[Hexadecimal] 1B 69 58 6E 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the template number selected from the machine.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

・The retrieved value is a value specified by a static command.

[Example]

・When template number 99 is selected:

If ESC i X n 1 00h 00h (1Bh 69h 58h 6Eh 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 63h

ESC iXc1	Retrieves machine settings (full cut option)

[ASCII] ESC i X c 1 n1 n2

[Decimal] 27 105 88 99 49 nd1 nd2

[Hexadecimal] 1B 69 58 63 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the various cut settings.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h: Full cut setting OFF, chain printing setting ON

01h: Full cut setting ON, chain printing setting ON

08h: Full cut setting OFF, chain printing setting OFF

09h: Full cut setting ON, chain printing setting ON

・The retrieved value is a value specified by a static command.

[Example]

・When the full cut setting is ON and the chain printing setting is ON:

If ESC i X c 1 00h 00h (1Bh 69h 58h 63h 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 01h

ESC iXy1	Retrieve machine settings (full cut option–specify cutting after specified number of labels)

[ASCII] ESC i X y 1 n1 n2

[Decimal] 27 105 88 121 49 nd1 nd2

[Hexadecimal] 1B 69 58 79 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the setting for full cutting after a specified number of labels.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

・The retrieved value is a value specified by a static command.

[Example]

・When a full cut is specified for every five labels:

If ESC i X y 1 00h 00h (1Bh 69h 58h 79h 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 05h

ESC iXH1	Retrieve half cut setting

[ASCII] ESC i X H 1 n1 n2

[Decimal] 27 105 88 72 49 nd1 nd2

[Hexadecimal] 1B 69 58 48 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the half cut setting.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h: Half cut setting OFF

01h: Half cut setting ON

・The retrieved value is a value specified by a static command.

[Example]

・When the half cut setting is ON:

If ESC i X H 1 00h 00h (1Bh 69h 58h 48h 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 01h

ESC iXM1	Retrieve mirror printing setting

[ASCII] ESC i X M 1 n1 n2

[Decimal] 27 105 88 77 49 nd1 nd2

[Hexadecimal] 1B 69 58 4D 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the mirror printing setting.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h: Mirror printing setting OFF

01h: Mirror printing setting ON

・The retrieved value is a value specified by a static command.

[Example]

・When the mirror printing setting is ON:

If ESC i X M 1 00h 00h (1Bh 69h 58h 4Dh 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 01h

ESC iXs1	Retrieve special tape setting

[ASCII] ESC i X s 1 n1 n2

[Decimal] 27 105 88 115 49 nd1 nd2

[Hexadecimal] 1B 69 58 73 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the special tape setting.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h: Special tape setting OFF

01h: Special tape setting ON

・The retrieved value is a value specified by a static command.

[Example]

・When the special tape setting is ON:

If ESC i X s 1 00h 00h (1Bh 69h 58h 73h 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 01h

ESC iXm1	Retrieve character code set

[ASCII] ESC i X m 1 n1 n2
[Decimal] 27 105 88 109 49 nd1 nd2
[Hexadecimal] 1B 69 58 6D 31 nh1 nh2
[Parameters] nh1: 00h (fixed)
nh2: 00h (fixed)
[Description]

・Retrieves the specified character code set. (For details on the character code sets, refer to the character code tables.)
・3-byte data is returned from the machine.
[1]: 01h (fixed)
[2]: 00h (fixed)
[3]: Setting
00h: Brother standard
01h: Windows 1250 (Eastern Europe)
02h: Windows 1252 (Western Europe)
・The retrieved value is a value specified by a static command.

[Example]

・When the character code set is set to the Brother standard:
If ESC i X m 1 00h 00h (1Bh 69h 58h 6Dh 31h 00h 00h) is sent to the machine, the following is returned from the machine.
01h 00h 00h

ESC iXj1	Retrieve international character set setting

[ASCII] ESC i X j 1 n1 n2

[Decimal] 27 105 88 106 49 nd1 nd2

[Hexadecimal] 1B 69 58 6A 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the international character set setting.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h:	USA
01h:	France
02h:	Germany
03h:	UK
04h:	Denmark
05h:	Sweden
06h:	Italy
07h:	Spain
08h:	Japan
09h:	Norway
0Ah:	Denmark II
0Bh:	Spain II
0Ch:	Latin America
0Dh:	Korea
40h:	Legal

・The retrieved value is a value specified by a static command.

[Example]

・When the international character setting is set to that for Japan:

If ESC i X j 1 00h 00h (1Bh 69h 58h 6Ah 31h 00h 00h) is sent to the machine, the following is returned from the machine.

ESC iXf1	Retrieve the prefix character

[ASCII] ESC i X f 1 n1 n2

[Decimal] 27 105 88 102 49 nd1 nd2

[Hexadecimal] 1B 69 58 66 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the prefix character code.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Specified character

・The retrieved value is a value specified by a static command.

[Example]

・When the prefix character is set to “_”:

If ESC i X f 1 00h 00h (1Bh 69h 58h 66h 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 5Fh

(“_”)

ESC iXR1	Retrieve line feed command setting text string

[ASCII] ESC i X R 1 n1 n2

[Decimal] 27 105 88 82 49 nd1 nd2

[Hexadecimal] 1B 69 58 52 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the text string specified for the line feed command.

・2- to 22-byte data is returned from the machine. (Varies depending on the length of the text string)

[1, 2]: nh1 nh2 (number of characters) nh1 + (nh2*256)

[3 and later]: Text string

・The retrieved value is a value specified by a static command.

[Example]

・When the text string for the line feed command is specified as “0Dh 0Ah”:

If ESC i X R 1 00h 00h (1Bh 69h 58h 52h 31h 00h 00h) is sent to the machine, 02h 00h 0Dh 0Ah is returned from the machine.

ESC iXC1	Retrieve number of copies setting

[ASCII] ESC i X C 1 n1 n2

[Decimal] 27 105 88 67 49 nd1 nd2

[Hexadecimal] 1B 69 58 43 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the number of copies specified to be printed.

・4-byte data is returned from the machine.

[1]: 02h (fixed)

[2]: 00h (fixed)

[3, 4]: nh3 nh4 settings

nh3+(nh4*256): Number of copies

・The retrieved value is a value specified by a static command.

[Example]

・When the number of copies is set to 500:

If the command ESC i X C 1 00h 00h (1Bh 69h 58h 43h 31h 00h 00h) is sent to the machine,

02h 00h F4h 01h is returned from the machine. 244 (F4h) + (1 (01h) * 256) = 500 characters

ESC iXN1	Retrieve number of Numbering copies setting

[ASCII] ESC i X N 1 n1 n2

[Decimal] 27 105 88 78 49 nd1 nd2

[Hexadecimal] 1B 69 58 4E 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the number of copies specified to be printed with Numbering.

・4-byte data is returned from the machine.

[1]: 02h (fixed)

[2]: 00h (fixed)

[3, 4]: nh3 nh4 settings

nh3+(nh4*256): Number of Numbering copies

・The retrieved value is a value specified by a static command.

[Example]

・When the number of Numbering copies is set to 500:

If the command ESC i X N 1 00h 00h (1Bh 69h 58h 4Eh 31h 00h 00h) is sent to the machine,

02h 00h F4h 01h is returned from the machine. 244 (F4h) + (1 (01h) * 256) = 500 characters

ESC iXF1	Retrieve FNC1 replacement setting

[ASCII] ESC i X F 1 n1 n2

[Decimal] 27 105 88 70 49 nd1 nd2

[Hexadecimal] 1B 69 58 46 31 nh1 nh2

[Parameters] nh1: 00h (fixed)

nh2: 00h (fixed)

[Description]

・Retrieves the FNC1 replacement setting.

・3-byte data is returned from the machine.

[1]: 01h (fixed)

[2]: 00h (fixed)

[3]: Setting

00h: FNC1 replacement setting OFF

01h: FNC1 replacement setting ON

・The retrieved value is a value specified by a static command.

[Example]

・When the FNC1 replacement setting is OFF:

If ESC i X F 1 00h 00h (1Bh 69h 58h 46h 31h 00h 00h) is sent to the machine, the following is returned from the machine.

01h 00h 00h

Character code table

Standard character code table

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p	Ç	É	á	▒	└		α	
1			!	1	A	Q	a	q	ü	æ	í	▒	┴		ß	±
2			”	2	B	R	b	r	é	Æ	ó	▓	┬			
3			#	3	C	S	c	s	â	ô	ú	│	├			¾
4			$	4	D	T	d	t	ä	ö	ñ	┤	─			
5			%	5	E	U	e	u	à	ò	Ñ		┼			§
6			&	6	F	V	f	v	å	û	ª				µ	÷
7			’	7	G	W	g	w	ç	ù	º					
8			(	8	H	X	h	x	ê	ÿ	¿	©	╚			°
9			)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘		·
A			*	:	J	Z	j	z	è	Ü	€	║	╩	┌	Ω	
B			+	;	K	[	k	{	ï	¢	½	╗	╦	✓	δ	
C			,	<	L	\	l	¦	î	£	¼	╝	╠	☑		³
D			-	=	M	]	m	}	ì	¥	¡	TEL	═		ø	²
E			.	>	N	^	n	~	Ä	Pts	«	FAX	╬			
F			/	?	O	_	o	DEL	Å	ƒ	»	┐		□		

“■” indicates that a space is printed.

“■” indicates that the character will change if the international character set is switched.

Eastern European character code table (Windows 1250)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p	€	t˘	■	°	Ŕ	Đ	ŕ	đ
1			!	1	A	Q	a	q	À	‘	ˇ	±	Á	Ń	á	ń
2			"	2	B	R	b	r	,	’	˘	˛	Â	Ň	â	ň
3			#	3	C	S	c	s	Ľ	“	Ł	ł	Ă	Ó	ă	ó
4			$	4	D	T	d	t	„	”	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	Ą	µ	Ĺ	Ő	Í	ő
6			&	6	F	V	f	v	†	–	|	¶	Ć	Ö	ć	ö
7			’	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	ľ	■	¨	¸	Č	Ř	č	ř
9			)	9	I	Y	i	y	‰	™	©	ą	É	Ů	é	ů
A			*	:	J	Z	j	z	Š	š	Ş	ş	Ę	Ú	ę	ú
B			+	;	K	[	k	{	<	>	«	»	Ë	Ű	ë	ű
C			,	<	L	\	l	¦	Ś	ś	¬	Ľ	Ě	Ü	ě	ü
D			–	=	M	]	m	}	Ť	ť	–	˝	Í	Ý	í	ý
E			.	>	N	^	n	~	Ž	ž	®	ľ	Î	Ţ	î	ţ
F			/	?	O	_	o	DEL	Ź	ź	Ż	ż	Ď	ß	ď	˙

“■” indicates that a space is printed.

“■” indicates that the character will change if the international character set is switched.

Western European character code table (Windows 1252)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0	@	P	`	p	€			°	À	Ð	à	ð
1			!	1	A	Q	a	q	~	‘	¡	±	Á	Ñ	á	ñ
2			”	2	B	R	b	r	,	’	¢	²	Â	Ò	â	ò
3			#	3	C	S	c	s	*ƒ*	“	£	³	Ã	Ó	ã	ó
4			$	4	D	T	d	t	„	”	¤	´	Ä	Ô	ä	ô
5			%	5	E	U	e	u	…	•	¥	µ	Å	Õ	å	õ
6			&	6	F	V	f	v	†	–	|	¶	Æ	Ö	æ	ö
7			’	7	G	W	g	w	‡	—	§	·	Ç	×	ç	÷
8			(	8	H	X	h	x	^	˜	¨	¸	È	Ø	è	ø
9			)	9	I	Y	i	y	‰	™	©	¹	É	Ù	é	ù
A			*	:	J	Z	j	z	Š	š	ª	º	Ê	Ú	ê	ú
B			+	;	K	[	k	{	<	>	«	»	Ë	Û	ë	û
C			,	<	L	\	l	¦	Œ	œ	¬	¼	Ì	Ü	ì	ü
D			-	=	M	]	m	}			-	½	Í	Ý	í	ý
E			.	>	N	^	n	~	Ž	ž	®	¾	Î	Þ	î	þ
F			/	?	O	_	o	DEL		Ÿ	¯	¿	Ï	ß	ï	ÿ

“■” indicates that a space is printed.

“■” indicates that the character will change if the international character set is switched.

International character set table

Compatible characters in each language when the international character set is switched

n		23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
0	United States	#	$	@	[	\	]	^	`	{	¦	}	~
1	France	#	$	à	°	ç	§	^	`	é	ù	è	¨
2	Germany	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
3	Britain	£	$	@	[	\	]	^	`	{	¦	}	~
4	Denmark I	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
5	Sweden	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
6	Italy	#	$	@	°	\	é	^	ù	à	ò	è	ì
7	Spain I	Pt	$	@	¡	Ñ	¿	^	`	¨	ñ	}	~
8	Japan	#	$	@	[	¥	]	^	`	{	¦	}	~
9	Norway	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
10	Denmark II	#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
11	Spain II	#	$	á	¡	Ñ	¿	é	`	í	ñ	ó	ú
12	Latin America	#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú
13	Korea	#	$	@	[	₩	]	^	`	{	¦	}	~
64	Legal	#	$	§	°	´	"	¶	`	©	®	†	™

Appendix: Specifications

P-touch Template specifications

Printing	Print mode			Raster (PCBP mode) ESC/P mode P-touch Template mode
	Maximum printing length			1 meter
	Resolution (dpi)			360 dpi × 360 dpi
	Text	Fonts		Bitmap fonts: Helsinki, Brussels, Letter Gothic Bold Outline fonts: Helsinki, Brussels, Letter Gothic
		Size (dots)		Bitmap fonts: 24 × 24, 32 × 32 Outline fonts: 33 to 380 dots (Size: 21)
		Character style		None, Bold, Italics, Outline, Shadow, Shadow + Outline
		Horizontal alignment		Left, Center, Right
		Rotate		Vertical, Horizontal
	Bar code		Protocols *1	CODE39, ITF (I-2/5), EAN-13, EAN-8, UPC-A, UPC-E, CODABAR, CODE128, GS1-128 (UCC/EAN-128), QR Code (Model 1, Model 2, micro QR), PDF417 (Standard, Truncate), DataMatrix (ECC200 Square, ECC200 Rectangular), MaxiCode, Micro PDF417, RSS-14, RSS-Limited, RSS Expanded
			Width	Large, Medium, Small, Minimum
Transfer	RS	Baud rate (bps)		115.2K, 57.6K, 38.4K, 31.25K, 28.8K, 19.2K, 14.4K, 9600, 4800, 2400, 1200, 600
		Busy		DTR, Xon/Xoff
		Bit length		8, 7
		Parity		NONE, ODD, EVEN
		Stop bit		1 bit

*1 BarStar Pro Encode Library (DataMatrix, MaxiCode, PDF417, RSS) Copyright © 2007 AINIX Corporation.
All rights reserved.
QR Code is a registered trademark of DENSO WAVE INCORPORATED in Japan and other countries.
QR Code Generating Program Copyright © 2008 DENSO WAVE INCORPORATED